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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,084	08/22/2001	Victor S. Lobanov	1503.1070003	7373

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WASHINGTON, DC 20005

EXAMINER

MAHATAN, CHANNING

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/934,084

Applicant(s)

LOBANOV ET AL.

Examiner

Channing S Mahatan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 14-40 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-40 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>44 Sheets</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### *APPLICANTS' ELECTION*

Applicants' election with traverse of Group I (claims 1-13; drawn to a method for determining properties of products from a combinatorial chemical library P using features of their respective building blocks) in the response, filed 30 December 2003, is acknowledged. The traversal is on the ground(s) that "consideration of these groups together would not impose an undue burden on the Examiner. This is not found persuasive because the "Election/Restrictions" requirement previously set forth indicated Groups I and II have different functions, different effects (i.e. different results), and different modes of operation. While it is acknowledged that Groups I and II are classified in the same class and subclass; classification within the same class and subclass does not preclude each Group from a required non-coextensive non-patent literature search (i.e. the search required for Group I is not required for Group II). Applicants are directed to the "Election/Restriction Requirement" indicating reasons for distinctness between the identified groups.

Claims 14-40 are withdrawn from further consideration pursuant to 37 C.F.R. § 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Therefore, the requirement is still deemed proper and is therefore made FINAL. Applicants timely traversed the restriction (election) requirement in the Office Action mailed 30 September 2003.

### *CLAIMS UNDER EXAMINATION*

Claims herein under examination are claims 1-13.

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*ALLOWABLE CLAIMS*

Claims 1-13 are found allowable.

*REASONS FOR ALLOWANCE*

The following is an Examiner's statement of reasons for allowance:

In view of the prior art and Applicants' 'Information Disclosure Statement(s)' (filed 02 May 2003, 01 May 2003, 06 February 2003, and 21 November 2001) the instantly claimed invention "A method for determining properties of products from a combinatorial chemistry library P using features of their respective building blocks" comprising the steps of: 1) determining feature(s) for each building block in the combinatorial library; 2) selecting a training subset from the combinatorial library; 3) determining the properties for each compound in the training subset; 4) identifying the corresponding building blocks of the training subset and concatenating their features; 5) inferring the mapping function by a supervised learning approach; 6) identifying corresponding building blocks and concatenating features for a product; and 7) mapping the properties of the product, wherein these steps recite specific equations/parameters (refer to claim 1, steps 1-7) is found free of the art.

Prior art relevant to the instant claimed invention is Linusson et al. (Statistical Molecular Design of Building Blocks for Combinatorial Chemistry. 08 March 2000, Volume 43, pages 1320-1328). Linusson et al. describes the application of statistical designs to the building block sets compared to selections based on the final products (Abstract). Figure 1 depicts a flowchart for the selection procedures (page 1321), wherein 1) building blocks are characterized (i.e. feature(s)/properties determined); 2) subset of building blocks are selected; 3) applying a supervised learning approach (i.e. D-optimal design, space-filling design, or cluster-based

design; page 1321, right column beginning on line 14); and 4) mapping these properties for the subset building blocks (via score plots, Tanimoto coefficients, Euclidean distance, etc.) (page 1323, beginning on the left column, beginning on line 29; and Figure 4). However, Linusson et al. does not anticipate or suggest the instantly claimed invention because of the absence of the teaching for the concatenating of features for a product into a single vector (i.e. claim 1, step 4); and the particular equations/parameters as claimed.

No pending United States applications have been identified with claims directed to the same invention as claimed herein. It should be noted particular support for the teachings of the instantly claimed invention can be found on pages 9-13 of the specification. Therefore, claims 1-13 are deemed allowable.

Any comments considered necessary by Applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*EX PARTE QUAYLE*

This application is in condition for allowance except for the presence of claims 14-40 to an invention non-elected with traverse in the response filed 30 December 2003. Applicants' are requested to cancel the noted claims or take other appropriate action (37 C.F.R. § 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue.

Further, the disclosure is objected to because it contains embedded hyperlinks and/or other form of browser-executable code page 14 (line 3). Applicants are required to delete the

embedded hyperlinks and/or other form of browser-executable code. Applicants are requested to review the application for embedded hyperlinks and/or other forms of browser-executable code and delete them. Embedded hyperlinks and/or other form of browser-executable code are impermissible in the text of the application as they represent an improper incorporation by reference. See M.P.E.P. § 608.01 and 608.01(p). A suggested format for the above objection is “World Wide Web Address: [netsci.org/Science/Combichem/feature08.html](http://netsci.org/Science/Combichem/feature08.html).”

Prosecution on the merits is closed, except for consideration of the above matters, in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

*EXAMINER INFORMATION*

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 C.F.R. § 1.6(d)). The CM1 Fax Center number is either (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Channing S. Mahatan whose telephone number is (571) 272-0717. The Examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward, Ph.D., can be reached on (571) 272-0722.

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Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina M. Plunkett, whose telephone number is (571) 272-0549 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

Date: *March 21, 2004*

Examiner Initials: *CSM*

*Marianne P. Allen*  
MARIANNE P. ALLEN  
PRIMARY EXAMINER  
*3/22/04*  
*Art 1631*